Clarke®

REVERSIBLE AIR DRILL

MODEL NO: CAT87

PART NO: 3110835

OPERATING & MAINTENANCE INSTRUCTIONS

GC0613

INTRODUCTION

Thank you for purchasing this CLARKE Reversible Air Drill

Before attempting to use this product, please read this manual thoroughly and follow the instructions carefully. In doing so you will ensure the safety of yourself and that of others around you, and you can look forward to your purchase giving you long and satisfactory service.

IMPORTANT

Please read all of the safety and operating instructions carefully before using this product. Please pay particular attention to all sections of these instructions that display warning symbols and notices.

GUARANTEE

This product is guaranteed against faulty manufacture for a period of 12 months from the date of purchase. Please keep your receipt which will be required as proof of purchase.

This guarantee is invalid if the product is found to have been abused or tampered with in any way, or not used for the purpose for which it was intended.

Faulty goods should be returned to their place of purchase, no product can be returned to us without prior permission. This guarantee does not effect your statutory rights.

GENERAL SAFETY RULES

CAUTION: FAILURE TO FOLLOW THESE PRECAUTIONS COULD RESULT IN PERSONAL INJURY, AND/OR DAMAGE TO PROPERTY.

WORK ENVIRONMENT

1. Keep the work area clean and tidy.
2. Dress appropriately - Do not wear loose clothing or jewellery. Tie long hair out of the way.
3. Keep children and visitors away - Do not let children handle the tool.
4. Do not operate the tool where there are flammable liquids or gases.
5. Keep the air supply hose away from heat, oil and sharp edges.
6. Do not fit the tool to any stand or clamping device that may damage it.

USE

1. Stay alert and use common sense - do not operate the drill when you are tired or under the influence of alcohol, drugs or medication.
2. Always wear eye protectors when using the drill - Eye protectors must provide protection from flying particles from the front and the side.
3. Always wear ear protectors when using the drill.
4. Do not overreach - Keep proper footing and balance at all times.
5. Never use any type of bottled gas as a source of power for the drill.
6. Do not connect the air supply hose with your finger on the trigger of the drill.
7. Do not exceed the maximum pressure for the drill 90 psi / 6.2 bar.
8. Check hoses for leaks or worn condition before use, and ensure that all connections are secure.
9. Do not use the tool for any other purpose than that described in this manual.
10. Do not carry out any alterations or modifications to the tool.
11. Always disconnect from the air supply when:
    - Performing any maintenance
    - The drill is not in use.

- The drill will be left unattended.
- Moving to another work area.
- Passing the drill to another person.

12. Never use the impact wrench if it is defective or operating abnormally.
13. The drill should be serviced at regular intervals by qualified service personnel.
14. Avoid damaging the drill for example by applying excessive force of any kind.
15. ALWAYS maintain the tool with care. Keep it clean for the best and safest performance.
16. Quick change couplings should not be located at the tool. They add weight and could fail due to vibration.
17. DO NOT force or misuse the tool. It will do a better and safer job at the rate for which it was designed.
18. Do not remove any labels. Damaged labels should be replaced.
19. This tool vibrates with use. Vibration may be harmful to your hands or arms. Stop using the tool if discomfort, a tingling feeling or pain occurs. Seek medical advice before resuming use.

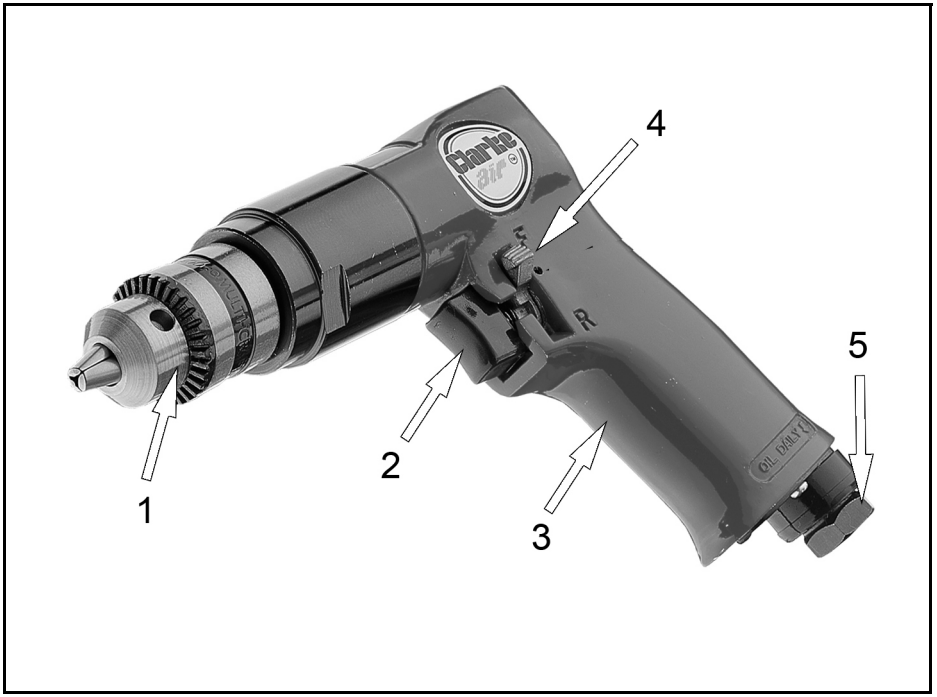
TRANSPORTATION

1. Never carry the drill by the air supply hose.
2. Never carry the drill with your finger on the trigger.

STORAGE

1. When not in use the drill must be disconnected from the air supply and stored in a dry place out of the reach of children (preferably in a locked cabinet).
2. Avoid storing the drill in environments where the temperature is below $0^{O}C$.

OVERVIEW



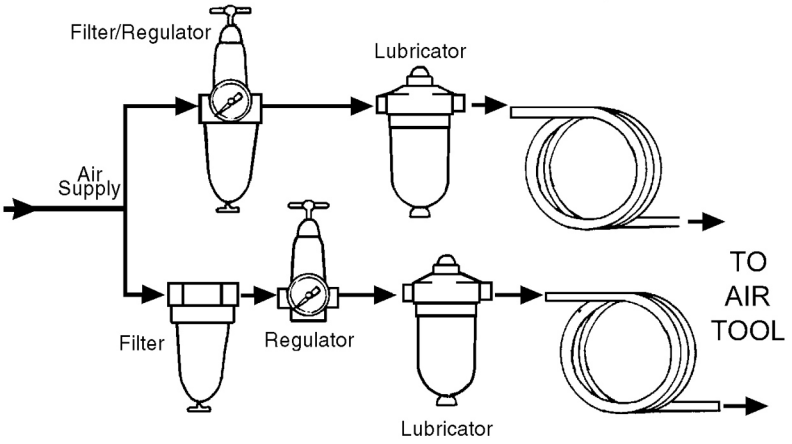
NO	DESCRIPTION	NO	DESCRIPTION
1	Chuck	4	Forward/Reverse Switch
2	Trigger	5	1/4" BSP (Female Air Inlet)
3	Handle		

THE COMPRESSED AIR SUPPLY

AIR SUPPLY REQUIREMENTS

WARNING: COMPRESSED AIR CAN BE DANGEROUS. ENSURE THAT YOU ARE FAMILIAR WITH ALL PRECAUTIONS RELATING TO THE USE OF COMPRESSORS AND COMPRESSED AIR SUPPLY.

- Use only clean, dry, regulated compressed air as a power source.
- Air compressors used with the impact wrench must comply with the appropriate European Community Safety Directives.
- A build-up of moisture or oil in the air compressor will accelerate wear and corrosion in the impact wrench. ensure any moisture is drained from the compressor daily and the inlet filter is kept clean.
- If an unusually long air hose is required,(over 8 metres), the line pressure or the hose inside diameter may need to be increased.
- The air hose must must be rated at least 150% of the maximum operating pressure of the tool.



- A typical air line layout is shown above. If an automatic in-line filter/ regulator is used,it will keep the tool in good condition, but should be regularly checked and topped up with oil. SAE 10 oil should be used, and the lubricator adjusted to approx 2 drops per minute.
- The minimum hose diameter should be 5/16"(8mm) ID and fittings should have the same internal dimensions.

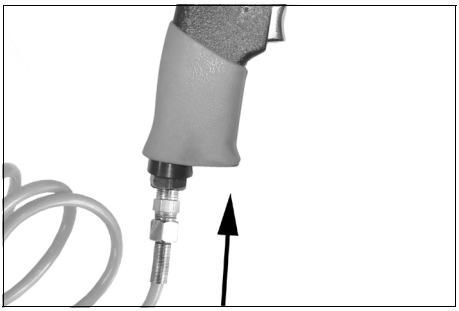
- Never exceed the maximum operating pressure for the tool. It is recommended that air pressure to this tool does not exceed 90 psi at the tool when running. Higher pressures and unclean air will shorten the life of the tool due to faster wear and is a possible safety hazard.

BEFORE USE

WARNING: COMPRESSED AIR CAN BE DANGEROUS. ENSURE THAT YOU ARE FAMILIAR WITH ALL PRECAUTIONS RELATING TO THE USE OF AIR COMPRESSORS AND COMPRESSED AIR SUPPLY.

NOTE: Ensure the compressor is turned off.

1. If required, connect an in-line mini oiler to the tool.
   - A mini oiler helps to prolong the life of the air tool. Remove the oil fill screw from the side of the mini oiler and fill with Air-line Oil available from your CLARKE dealer. Replace the screw before using the tool.



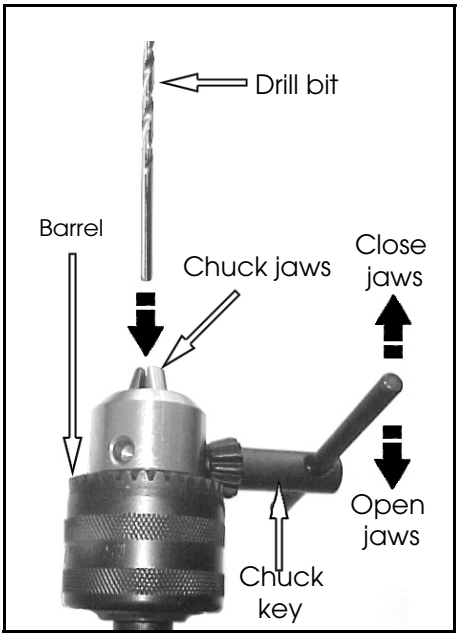
2. If a mini-oiler is not being used, run a few drops of oil through the tool before use. It can be entered through the inlet strainer or via the hose at the nearest connection to the air supply.
3. Connect a suitable hose as shown.
4. Connect the other end of the hose to the compressor.
5. Turn on the air supply and check for air leaks. Rectify any found before proceeding
6. Your air tool is now ready for use.

You can fit a whip hose with a quick fit coupling if required (available from your Clarke dealer.)

Parts & Service: 020 8988 7400 / E-mail: Parts@clarkeinternational.com or Service@clarkeinternational.com

INSERTING/REMOVING THE DRILL BIT

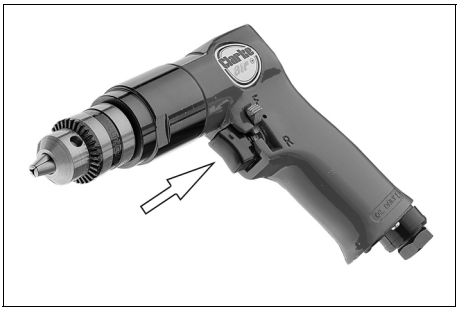
1. Open the chuck jaws by inserting the chuck key in one of the holes in the chuck and turning it as shown.
2. Make sure that the head of the chuck key is located on the barrel of the chuck.
3. Turn the chuck key until the chuck jaws are open sufficiently to take the drill bit.
4. Place the drill bit in the jaws of the chuck as far as it will go.
5. Close the chuck jaws and tighten to grip the drill bit by turning the chuck key as shown.
6. Make sure that the chuck jaws are fully closed and that the drill bit is held firmly.
7. Your air drill is now ready for use.



OPERATION

OPERATING THE AIR DRILL

WARNING: MAKE SURE THAT THE CHUCK KEY HAS BEEN REMOVED BEFORE USING THE DRILL.



1. Squeeze the trigger switch to start the drill.
2. Wait until the drill is running at its maximum speed before applying it carefully to the workpiece.
3. Release the trigger switch to stop the drill.
4. To change the direction of rotation move the lever on the left side of the drill body from F to R.
5. Always ensure the drill has stopped before putting it down.

DISCONNECTING THE AIR SUPPLY

Do not disconnect the air supply hose until the compressor has been shut down and the compressed air released.

1. Refer to the compressor instruction manual for the procedure to shut down and release the compressed air.
2. Once the pressure has been released, disconnect the air supply hose from the air drill.

Store the tool safely in its box in a dry, secure environment.

MAINTENANCE

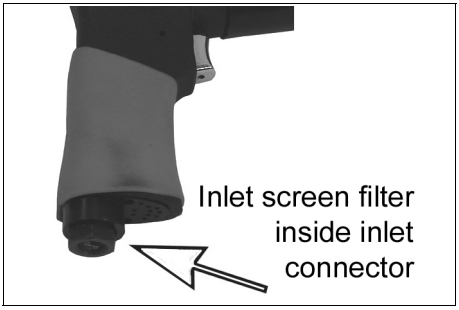
WARNING: MAKE SURE THAT THE IMPACT WRENCH IS DISCONNECTED FROM THE AIR SUPPLY BEFORE STARTING ANY CLEANING, OR MAINTENANCE PROCEDURES.

DAILY

- Before use, drain water from the air tank, air line and compressor.
- Pour a few drops of CLARKE airline oil, into the air inlet. This should be carried out regardless of whether or not an in-line mini oiler is used. If an inline mini oiler is not used, this procedure should be repeated after every two to three hours of use.

WEEKLY

- Check the air inlet screen filter for blockage and clean if necessary.



CLEANING

- Keep the body of the impact wrench clean and free from debris. Grit or gum deposits in the tool may reduce efficiency.

SERVICE AND REPAIR

If the tool runs erratically or becomes inefficient although the air supply is in good order, it may be necessary to dismantle the tool. Such servicing and repair work should be carried out by qualified service technicians.

PERFORMANCE

Please note that factors other than the tool may effect its operation and efficiency such as reduced compressor output, excessive drain on the airline moisture or restrictions in the air-line, or the use of connectors of improper size or poor condition which will reduce air supply.

Grit or gum deposits inside the tool may also reduce its efficiency. This condition can be corrected by cleaning out the air strainer and flushing out the tool with gum solvent or oil, or failing this, the motor may require dismantling.

**Clarke Air Line Oil (part no. 3050825) is available from your CLARKE dealer .

STORAGE

If the tool is to be stored, or is idle for longer than 24 hours, run a few drops of Clarke air line oil into the air inlet, and run the tool for 5 seconds in order to lubricate the internal parts.

When not in use, disconnect from air supply, clean tool and store in a safe, dry place.

ACCESSORIES

A wide range of accessories is available including filter/regulators, lubricators, high-pressure hoses (5 to 50 metres) etc.

Contact your CLARKE dealer for further information or CLARKE International Service Department on 01992 565333.

TROUBLESHOOTING

SYMPTOM	PROBLEM	SOLUTION
Tool runs at normal speed but slows down under any load.	1. Excessive pressure on drill. 2. Motor parts worn. 3. Worn or sticking mechanism due to lack of lubricant.	1. Reduce the force applied to the drill. 2. Return to Clarke dealer for repair. 3. Drip air tool lubricating oil into air inlet. Allow oil to soak moving parts before using.
Tool runs slowly. Air flows weakly from exhaust.	1. Motor parts jammed with gum/dirt. 2. Regulator in closed position. 3. General airflow blocked by dirt.	1. Examine inlet air filter for cleanliness. 2. Adjust regulator to open position. 3. Operate tool in short bursts.
Tool will not run. Air flows freely from exhaust.	1. Motor vanes stuck due to buildup of foreign material.	1. Disconnect air supply and rotate tool assembly manually. 2. Try operating tool in short bursts. 3. Tap motor housing gently with a rubber mallet. 4. Drip a few drops of air tool lubricating oil into air inlet to soak moving parts.
Tool will not shut off.	1. Throttle O-rings damaged or ill-fitting in seat.	1. Return to Clarke dealer for repair.

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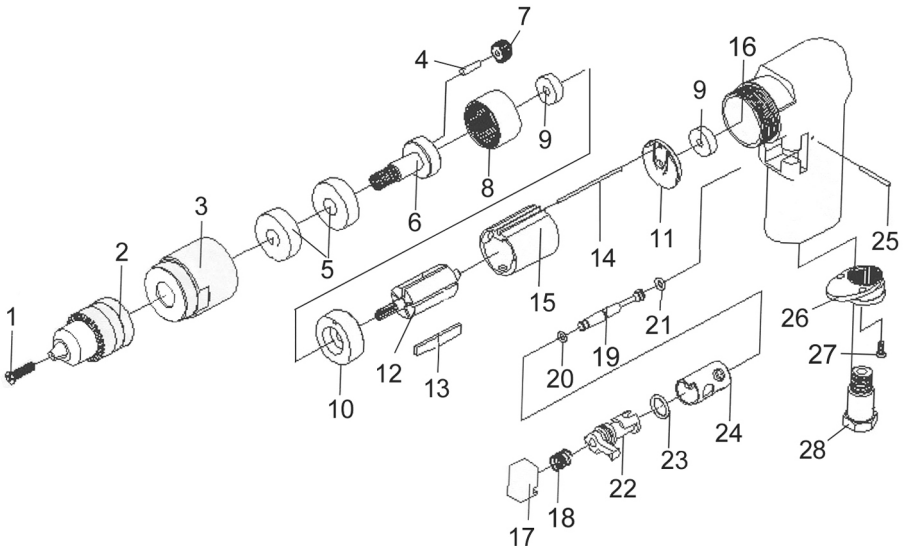
PARTS LIST & DIAGRAM



No	Description
1	Screw
2	Drill Chuck
3	Gear Housing
4	Pin
5	Ball Bearing
6	Planet Carrier
7	Planet Gear
8	Internal Gear
9	Ball Bearing
10	Bearing Housing
11	End Plate
12	Rotor Body
13	Rotor Blade
14	Motor Pin

No	Description
15	Cylinder
16	Motor Housing
17	Trigger
18	Valve Spring
19	Throttle Valve
20	O-Ring
21	O-Ring
22	Reverse Valve
23	O-Ring
24	Reverse Valve Bush
25	Pin
26	Exhaust Deflector
27	Screw
28	Air Inlet

SPECIFICATION

Model Number	CAT87
Part Number	3110835
Min. Hose Size (ID)	8 mm
Chuck Size	1.5 - 10 mm (3/8")
Operating Pressure	90 psi (6.2 bar)
Air Consumption	4 cfm
No Load Speed	1800 rpm @ 90psi
Air Inlet Size	1/4" BSP
Sound Pressure Level (LpA dB)	94 dB(A)
Sound Power Level (LwA dB)	104 dB(A)
Vibration Levels	1.75 m/s^2
Weight	1 kg

Please note that the details and specifications contained herein are correct at the time of going to print. However CLARKE International reserve the right to change specifications at any time without prior notice. Always consult the machine's data plate.

DECLARATION OF CONFORMITY

Clarke® INTERNATIONAL

This is an important document and should be retained

DECLARATION OF CONFORMITY

We declare that this product complies with the following standards/directives:

- **89/392/EEC**
- **EN 292-2**
- **EN 60 335 - 1**
- **EN 292-2**

Description: **Air tool range**

Model No: **CAT87**

Serial (Batch) No: **See Product Data Label**

Signed: _____

Clarke® INTERNATIONAL
Hemnall Street, Epping, Essex CM16 4LG

DOC No. HO75/27

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A SELECTION FROM THE VAST RANGE OF

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